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A b s t r a c t

The invention relates to an approximation of a DCT and a
quantization which are to be applied subsequently to digital
data for compression of this digital data. In order to
improve the transform, it is proposed to simplify a
predetermined transform matrix to require less operations
when applied to digital data. In addition, elements of the
simplified transform matrix constituting irrational numbers
are approximated by rational numbers. These measures are
compensated by extending a predetermined quantization to
include the operations which were removed in the
simplification of the predetermined transform matrix. The
included operations are further adjusted to compensate for
the approximation of elements of the simplified transform
matrix by rational numbers. If the simplified transform
matrix and the extended quantization are used as basis for
implementation, a fast transform with a good resulting
quality can be achieved. An approximation of an IDCT
employed in decompression of compressed digital data can be
simplified correspondingly.

For publication: Figure 2